

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Martin *et al.*

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Title: REGULATING ACCESS TO A
SCARCE RESOURCE

Docket No.: GB920010042US1
(IBMR-0127)

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Commissioner for Patents
P.O. Box 1450
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AMENDED BRIEF OF APPELLANTS

This is an appeal from the Final Rejection dated January 24, 2006, rejecting claims 1-56.

This Brief is accompanied by the requisite fee set forth in 37 C.F.R. 1.17 (c).

REAL PARTY IN INTEREST

International Business Machines Corporation is the real party in interest.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

As filed, this case included claims 1-56. Claims 1-56 remain pending. Claims 1-56 stand rejected and form the basis of this appeal.

STATUS OF AMENDMENTS

An amendment was submitted on March 24, 2006, in response to the After Final Rejection filed by the Office on January 24, 2006. The Amendment was not entered by the Examiner.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The invention relates to regulating access by users to a scarce resource, wherein the resource is capable of handling multiple concurrent accesses. A request for access to the scarce resource is received and it is determined whether the access level for the scarce resource is at a desired maximum. Responsive to determining that said access level is at a desired maximum, the requester is placed in a queue for access to said scarce resource. The requester is then provided with a notification that the request has been enqueued. Access is available to the requester upon reaching the head of the queue when the access level drops below the desired maximum.

Claim 1 claims a method for regulating access by users to a scarce resource, said resource being capable of handling multiple concurrent accesses, the method comprising the steps of: receiving a request for access to the scarce resource (see e.g., page 16, lines 5-11; FIG. 3a, item 200); determining whether the access level for said scarce resource is at a desired maximum (see e.g., page 16, lines 13-21; FIG. 3a, item 210); responsive to determining that said access level is at a desired maximum, placing said requester in a queue for access to said scarce resource (see

e.g., page 16, line 23 through page 17, line 11; FIG. 3a, item 240); and providing said requester with a notification that the request has been enqueued (see e.g. page 17, lines 1-10), access being available to said requester upon reaching the head of the queue and said access level dropping below said desired maximum (see e.g., page 17, line 25 through page 18, line 16), wherein an enqueued user may remain enqueued while navigating away from the scarce resource (see e.g., page 5, lines 20-24, page 6, line 13 through page 7, line 19).

Claim 21 claims an apparatus for regulating access by users to a scarce resource, said resource being capable of handling multiple concurrent accesses, the apparatus comprising: means for receiving a request for access to the scarce resource (see e.g., page 16, lines 5-11; FIG. 2, items 100, 140 and 110); means for determining whether the access level for said scarce resource is at a desired maximum (see e.g. page 16, lines 13-21; FIG. 2, item 150); means, responsive to determining that said access level is at a desired maximum, for placing said requester in a queue for access to said scarce resource (see e.g., page 16, line 23 through page 17, line 11; FIG. 2, items 130 and 180); and means for providing said requester with a notification that the request has been enqueued (see e.g. page 17, lines 1-10, FIG. 2, items 130 and 180); access being available to said requester upon reaching the head of the queue and said access level dropping below said desired maximum (see e.g., page 17, line 25 through page 18, line 16), wherein an enqueued user may remain enqueued while navigating away from the scarce resource (see e.g., page 5, lines 20-24, page 6, line 13 through page 7, line 19).

Claim 41 claims a method for requesting access to a scarce resource, said resource being capable of handling multiple concurrent accesses and access to said scarce resource being regulated, said method comprising the steps of: requesting access to said scarce resource of a web site (see e.g., page 16, lines 5-11; FIG. 3a, item 200); receiving a message that said access is

not currently available and that said request has been queued (see e.g. page 17, lines 1-10), access being available upon reaching the head of the queue and an access level for said resource dropping below a desired maximum (see e.g., page 17, line 25 through page 18, line 16), and maintaining said request in the queue (see e.g., page 16, line 23 through page 17, line 11; FIG. 3a, item 240) while an initiator of said request navigates away from the scarce resource (see e.g., page 5, lines 20-24, page 6, line 13 through page 7, line 19).

Claim 54 claims an apparatus for requesting access to a scarce resource, said resource being capable of handling multiple concurrent accesses and access to said scarce resource being regulated, said apparatus comprising: means for requesting access to said scarce resource of a web site (see e.g., page 16, lines 5-11; FIG. 2, items 100, 140 and 110); means for receiving a message that said access is not currently available and that said request has been queued (see e.g. page 17, lines 1-10, FIG. 2, items 130 and 180), and means for maintaining said request in the queue while an initiator of said request navigates away from the scarce resource (see e.g., page 5, lines 20-24, page 6, line 13 through page 7, line 19), access being available upon reaching the head of the queue and an access level for said resource dropping below a desired maximum (see e.g., page 17, line 25 through page 18, line 16).

Claim 55 claims a computer program comprising program code adapted to perform the steps of: receiving a request for access to the scarce resource, said resource being capable of handling multiple concurrent accesses (see e.g., page 16, lines 5-11; FIG. 3a, item 200); determining whether the access level for said scarce resource is at a desired maximum (see e.g., page 16, lines 13-21; FIG. 3a, item 210); responsive to determining that said access level is at a desired maximum, placing said requester in a queue for access to said scarce resource (see e.g., page 16, line 23 through page 17, line 11; FIG. 3a, item 240); and providing said requester with a

notification that the request has been enqueued (see e.g. page 17, lines1-10), access being available to said requester upon reaching the head of the queue and said access level dropping below said desired maximum (see e.g., page 17, line 25 through page 18, line 16), wherein an enqueued user may remain enqueued while navigating away from the scarce resource (see e.g., page 5, lines 20-24, page 6, line 13 through page 7, line 19).

Claim 56 claims a computer program for requesting access to a scarce resource, said resource being capable of handling multiple concurrent accesses and said access being regulated, said program comprising program code adapted to perform the steps of: requesting access to said scarce resource of a web site (see e.g., page 16, lines 5-11; FIG. 3a, item 200); receiving a message that said access not currently available and that said request has been queued (see e.g. page 17, lines1-10), access being available upon reaching the head of the queue and an access level for said resource dropping below a desired maximum (see e.g., page 17, line 25 through page 18, line 16), and maintaining said request in the queue while an initiator of said request navigates away from the scarce resource (see e.g., page 5, lines 20-24, page 6, line 13 through page 7, line 19).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1-15, 19-35 and 39-56 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Agrawal in view of Bondarenko.
2. Claims 16-18 and 36-38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Agrawal in view of Bondarenko and further in view of Slotznick.

ARGUMENT

1. REJECTION OF CLAIMS 10-15, 19-35 AND 39-56 UNDER 35 U.S.C. §103(a) OVER AGRAWAL IN VIEW OF BONDARENKO

Appellants respectfully submit that the rejection of claims 1-15, 19-35 and 39-56 under 35 U.S.C. 103(a) over Agrawal in view of Bondarenko is defective.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Appellants respectfully submit that the Agrawal and Bondarenko references, taken alone or in combination, fail to meet each of the three basic criteria required to establish a *prima facie* case of obviousness. As such, the rejection under 35 U.S.C. §103(a) is defective.

In the above referenced Final Office Action, the Examiner alleges that the cited references teach or suggest, *inter alia*, that an enqueued user may remain enqueued while navigating away from the scarce resource. The Office equates the feature with opening a new browser to navigate resources. Office Action of September 8, 2005, page 3 incorporated into Final Office Action, page 2 by reference. However, the Office's example only covers a case in 09/917,536

which an additional browser is used and does not cover a case in which a user navigates away from the scarce resource. This is because a user that is using a first resource, for example a file download window, and opens another resource, for example a news site, has not navigated away from the first resource, but has simply navigated to an additional resource. Navigating away from a window with a browser indicates that the browser no longer has access to the information on the window. As such, the opening of a new browser, as in the Office's example, does not navigate away from the first resource, but instead the first browser remains connected to the site. To this extent, the claimed invention includes "...wherein an enqueued user may remain enqueued while navigating away from the scarce resource." Claim 1. As such, the application used by the user of the claimed invention to navigate to the scarce resource does not have to remain connected to the site in order to remain enqueued as in Agrawal and Bondarenko, but instead the user may remain enqueued while navigating away from the scarce resource. Thus, the queue as included in the claimed invention is not taught or suggested by the queues of the cited references. Accordingly, Applicants respectfully request that the Office withdraw its rejection.

In the above referenced Final Office Action, the Examiner also alleges, with respect to dependent claims 20 and 40, that the cited references teach or suggest responsive to determining that said access level is currently at a desired maximum, determining whether said scarce resource is able to accommodate immediate access by said late requester. Applicants submit that claims 20 and 40 provide different determinations for a late request, for example of claim 20, hereafter "late request," than for a request as in claim 1, hereafter "normal request." For example, upon receipt of a normal request, the claimed invention, "...responsive to determining that said access level is at a desired maximum, plac[es] said requester in a queue for access to the

scarce resource.” Claim 1. As such, the requestor of a regular request of the claimed invention is not granted access if the access level is at a desired maximum, but instead is placed in the queue. In contrast, if the request of the claimed invention is a late request from a requester having missed access when available, it is determined “...responsive to determining that said access level is currently at a desired maximum, ...whether said scarce resource is able to accommodate immediate access by said late requester.” Claim 20. Thus, the late requestor of the claimed invention may be granted immediate access even when the access level of the scarce resource is at the desired maximum. Thus, in contrast to the same process of Bondarenko, the claimed invention uses a different determination for late requests than the determination that it uses for regular requests. Thus, the determining step for a late request as included in the claimed invention is not equivalent to the functions of the queue in Bondarenko. Agrawal does not cure this deficiency. Accordingly, Applicants request withdrawal of this rejection.

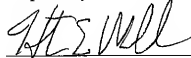
B. REJECTION OF CLAIMS 2, 7-10, 14, 16, 22, 24, 27 AND 31-33 UNDER 35 U.S.C. §103(a) OVER AGRAWAL IN VIEW OF BONDARENKO AND FURTHER IN VIEW OF SLOTKNIK

With respect to the rejected claims, Appellants incorporate the above enumerated arguments.

CONCLUSION

In summary, Appellants submit that claims 1-56 are allowable because the cited references, taken alone or in combination, fail to meet each of the three basic criteria required to establish a *prima facie* case of obviousness.

Respectfully submitted,



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CLAIMS APPENDIX

Claim Listing:

1. A method for regulating access by users to a scarce resource, said resource being capable of handling multiple concurrent accesses, the method comprising the steps of:
 - receiving a request for access to the scarce resource;
 - determining whether the access level for said scarce resource is at a desired maximum;
 - responsive to determining that said access level is at a desired maximum, placing said requester in a queue for access to said scarce resource; and
 - providing said requester with a notification that the request has been enqueued, access being available to said requester upon reaching the head of the queue and said access level dropping below said desired maximum,
 - wherein an enqueued user may remain enqueued while navigating away from the scarce resource.
2. The method of claim 1 further comprising the step of:
 - periodically providing said requester with updates on said requester's progress through the queue.
3. The method of claim 2, further comprising:
 - issuing said requester with a numbered ticket denoting said requester's position in the queue.
4. The method of claim 3, wherein said number is displayed to the requester.
5. The method of claim 3, wherein the step of periodically providing the requester with updates on said requester's progress through the queue comprises:
 - informing said requester of the ticket number of the last user granted access to said scarce resource.
6. The method of claim 3, comprising:
 - calculating the average time taken to serve the holder of each ticket number; and
 - providing said requester with an estimated time to wait based on said calculated average.
7. The method of claim 2, wherein the step of periodically providing the requester with updates is responsive to the requester polling for such updates.
8. The method of claim 7, comprising the step of:
 - downloading onto said requester's computer an executable program for initiating said polling.
9. The method of claim 1, comprising the steps of:
 - storing information on said requester's position in the queue and information for the purpose of providing the requester with notifications, said positional information being continually updated as said requester progresses through the queue.

10. The method of claim 9, comprising the step of:
initiating periodic updates to the requester on said requester's progress through the queue.
11. The method of claim 9, further comprising the step of:
providing the requester with a notification when access to the scarce resource is available.
12. The method of claim 9, wherein the step of storing requester information is responsive to determining that said requester is within a predetermined threshold of the head of said queue.
13. The method of claim 1, comprising the step of:
responsive to said requester re-requesting access to said scarce resource, providing the requester with an update on the requester's progress through the queue.
14. The method of claim 13, wherein each re-request presents a ticket number issued to the requester upon being placed in said queue, said method further comprising the step of:
using said presented ticket number to determine whether access is available to said requester; and
responsive to determining that access is available granting said access.
15. The method of claim 14, wherein the step of granting access comprises:
diverting said requester to a first server hosting said scarce resource.
16. The method of claim 14, comprising the step of:
responsive to determining that access is not available, diverting said request to a second server, said second server providing the requester with entertainment whilst in said queue.
17. The method of claim 1, comprising the step of:
providing said requester with entertainment whilst said requester in the queue.
18. The method of claim 17, wherein said entertainment is remote from the scarce resource.
19. The method of claim 1, wherein the step of determining whether said access level for said scarce resource is at a desired maximum comprises:
tracking the number of users currently accessing the scarce resource; and
comparing said number with a predetermined maximum value.
20. The method of claim 1, comprising the steps of:
receiving a late request for access to said scarce resource from said requester having missed access when available;
determining, upon receipt of the late request, whether the access level for said scarce resource is currently at a desired maximum;
responsive to determining that said access level is currently at a desired maximum, determining whether said scarce resource is able to accommodate immediate access by said late requester;

responsive to determining that it is possible to accommodate immediate access, by said requester, granting immediate access to said requester; and
responsive to determining that it is not possible to accommodate immediate access by said requester, re-queuing said requester.

21. Apparatus for regulating access by users to a scarce resource, said resource being capable of handling multiple concurrent accesses, the apparatus comprising:

means for receiving a request for access to the scarce resource;

means for determining whether the access level for said scarce resource is at a desired maximum;

means, responsive to determining that said access level is at a desired maximum, for placing said requester in a queue for access to said scarce resource; and

means for providing said requester with a notification that the request has been enqueued; access being available to said requester upon reaching the head of the queue and said access level dropping below said desired maximum,

wherein an enqueued user may remain enqueued while navigating away from the scarce resource.

22. The apparatus of claim 21 further comprising:

means for periodically providing the requester with updates on said requester's progress through the queue.

23. The apparatus of claim 22, further comprising:

means for issuing said requester with a numbered ticket denoting said requester's position in the queue.

24. The apparatus of claim 23, wherein said number is displayed to the requester.

25. The apparatus of claim 23, wherein the means for periodically providing the requester with updates on said requester's progress through the queue comprises:

means for informing said requester of the ticket number of the last user granted access to said scarce resource.

26. The apparatus of claim 23, comprising:

means for calculating the average time taken to serve the holder of each ticket number; and

means for providing said requester with an estimated time to wait based on said calculated average.

27. The apparatus of claim 22, wherein the means for periodically providing the requester with updates is responsive to the requester polling for such updates.

28. The apparatus of claim 27, comprising:

means for downloading onto said requester's computer an executable program for initiating said polling.

29. The apparatus of claim 21, comprising:
means for storing information on said requester's position in the queue and information for the purpose of providing the requester with notifications, said positional information being continually updated as said requester progresses through the queue.
30. The apparatus of claim 29, comprising:
means for initiating periodic updates to the requester on said requester's progress through the queue.
31. The apparatus of claim 29, further comprising the step of:
providing the requester with a notification when access to the scarce resource is available.
32. The apparatus of claim 29, wherein the means for storing requester information is responsive to means for determining that said requester is within a predetermined threshold of the head of said queue.
33. The apparatus of claim 21, comprising:
means, responsive to said requester re-requesting access to said scarce resource, for providing the requester with an update on said requester's progress through the queue.
34. The apparatus of claim 33, wherein each re-request presents a ticket number issued to the requester upon being placed in said queue, said apparatus further comprising:
means for using said ticket number to determine whether access is available to said requester; and
means, responsive to determining that access is available, for granting said access.
35. The apparatus of claim 34, wherein the means for granting access comprises:
means for diverting said request for access to a first server hosting said scarce resource.
36. The apparatus of claim 34, comprising:
means, responsive to determining that access is not available, for diverting said request to a second server, said second server providing the requester with entertainment whilst in said queue.
37. The apparatus of claim 21, comprising:
means for providing said requester with entertainment whilst said requester is in the queue.
38. The apparatus of claim 37, wherein said entertainment is remote from the scarce resource.
39. The apparatus of claim 21, wherein the means for determining whether said access level for said scarce resource is at a desired maximum comprises:
means for tracking the number of users currently accessing the scarce resource; and
means for comparing said number with a predetermined maximum value.

40. The apparatus of claim 21, comprising:
means for receiving a late request for access to said scarce resource from said requester having missed access when available;
means for determining, upon receipt of the late request, whether the access level for said scarce resource is currently at a desired maximum;
means for determining, responsive to determining that said access level is currently at a desired maximum, whether said scarce resource is able to accommodate immediate access by said late requester;
means, responsive to determining that it is possible to accommodate immediate access by said requester, for granting immediate access to said requester; and
means, responsive to determining that it is not possible to accommodate immediate access by said requester, for re-queuing said requester.
41. Method for requesting access to a scarce resource, said resource being capable of handling multiple concurrent accesses and access to said scarce resource being regulated, said method comprising the steps of:
requesting access to said scarce resource of a web site;
receiving a message that said access is not currently available and that said request has been queued, access being available upon reaching the head of the queue and an access level for said resource dropping below a desired maximum, and
maintaining said request in the queue while an initiator of said request navigates away from the scarce resource.
42. The method of claim 41, comprising the step of:
receiving periodic updates on progress through the queue.
43. The method of claim 42, comprising:
receiving a numbered ticket denoting said requester's position in the queue.
44. The method of claim 43 further comprising the step of:
displaying said ticket number to the requester.
45. The method of claim 43, wherein the step of periodically receiving updates on progress through the queue comprises:
receiving the ticket number of the last user granted access to said scarce resource.
46. The method of claim 45, further comprising the step of:
displaying said last ticket number to the requester.
47. The method of claim 43, comprising:
receiving an estimated time to wait based on a calculated average.
48. The method of claim 47, comprising the step of:
displaying said estimated time to wait based on a calculated average.

49. The method of claim 42, comprising the step of:
periodically polling for such updates.
50. The method of claim 49, comprising the step of:
responsive to determining that the head of the queue is within a predetermined threshold,
decreasing the polling period.
51. The method of claim 41, comprising the step of:
periodically re-requesting access to said scarce resource.
52. The method of claim 51, wherein the step of re-requesting access comprises:
presenting a ticket number issued upon being placed in said queue, said presented ticket
number being used to determine whether access is available to said requester.
53. The method of claim 41, further comprising the step of:
receiving a notification when access to the scarce resource is available.
54. Apparatus for requesting access to a scarce resource, said resource being capable of handling
multiple concurrent accesses and access to said scarce resource being regulated, said apparatus
comprising:
means for requesting access to said scarce resource of a web site;
means for receiving a message that said access is not currently available and that said
request has been queued, and
means for maintaining said request in the queue while an initiator of said request
navigates away from the scarce resource,
access being available upon reaching the head of the queue and an access level for said
resource dropping below a desired maximum.
55. A computer program comprising program code adapted to perform the steps of:
receiving a request for access to the scarce resource, said resource being capable of
handling multiple concurrent accesses;
determining whether the access level for said scarce resource is at a desired maximum;
responsive to determining that said access level is at a desired maximum, placing said
requester in a queue for access to said scarce resource; and
providing said requester with a notification that the request has been enqueued, access
being available to said requester upon reaching the head of the queue and said access level
dropping below said desired maximum,
wherein an enqueued user may remain enqueued while navigating away from the scarce
resource.
56. A computer program for requesting access to a scarce resource, said resource being capable
of handling multiple concurrent accesses and said access being regulated, said program
comprising program code adapted to perform the steps of:
requesting access to said scarce resource of a web site;

receiving a message that said access not currently available and that said request has been queued, access being available upon reaching the head of the queue and an access level for said resource dropping below a desired maximum, and

maintaining said request in the queue while an initiator of said request navigates away from the scarce resource.

EVIDENCE APPENDIX

No evidence is entered and relied upon in the appeal.

RELATED PROCEEDINGS APPENDIX

No decisions rendered by a court or the Board in any proceeding are identified in the related appeals and interferences section.